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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,935	12/16/2003	Timothy Paul Bock	4-43-7	5534

7590 06/01/2006

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EXAMINER	
AKANBI, ISIAKA O	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	10/736,935	BOCK ET AL.	
	Examiner	Art Unit	
	Isiaka O. Akanbi	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment

The amendment file 15 March 2006 has been entered into this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-8, 10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Street et al. (6,760,505 B1).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Street. The reference of Street teaches of the features of claim 1, comprising a passive light source (116) for emitting a beam of light, a passive receiver (160) of light (120), a MEMS mirror (128) for receiving said beam of light from said active source and for reflecting said beam of light toward said passive receiver (160) of light wherein said MEMS mirror is electrically controlled (174) to change its deflection profile until alignment is achieved between the active light source and the passive receiver of light (fig. 1)(col. 2, line 40-col. 3, line 1-67), however the reference of Street is silent regarding an active light source for emitting a beam of light. The use of an active light source for emitting a beam of light is known as evident by Igasaki et al. (2003/0010889 A1). It would have been obvious to one having ordinary skill in the art at the time of invention to provide an active light or passive light source for emitting a beam of light since this would work equally as well for the purpose of aligning accurately.

As to claim 6, Street discloses everything claimed, as applied to claim 1 above, in addition Street discloses wherein the passive receiver of light comprising an optical fiber (col. 3, line 7).

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Street. The reference of Street teaches of the features of claim 7, comprising a passive receiver

(160) of light (120), at least two MEMS mirrors (128/136), each of said at least two MEMS mirrors associated with the at least two active light sources in a one-to-one relationship and adapted to receive one of a light beams from its associated active light sources, the at least two MEMS mirrors for receiving and reflecting said beams of light toward said passive receiver (160) of light wherein said at least two MEMS minors are electrically controlled (174) to change their deflection profile until alignment is achieved between each active light source and its associated passive receiver of light and a plurality (i.e. at least two source) passive light source (116) for emitting a beam of light (fig. 1)(col. 2, line 40-col. 3, line 1-67), however the reference of Street is silent regarding plurality (i.e. at least two) of an active light source for emitting a beam of light. The use of plurality (i.e. at least two) of an active light source for emitting a beam of light is known as evident by Igasaki et al. (fig. 1)(2003/0010889 A1). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to provide an active light or passive light source for emitting a beam of light since this would work equally as well for the purpose of aligning accurately.

As to claims 8 and 12, Street discloses everything claimed, as applied to claim 7 above, in addition Street discloses wherein the passive receiver (160) of light comprising plurality (i.e. at least two) optical fibers (fig. 1)(col. 3, line 7).

As to claim 13, Street discloses everything claimed, as applied to claim 10 above, in addition Street discloses wherein each beam is operating at a different wavelengths (fig. 1)(col. 2, line 42-45).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Street. The reference of Street discloses of the features of claim 14, comprising a passive optical device (104/156), an alignment monitoring photodiode (fig. 2)(col. 5, line 60-col. 6, line 1-3), a first and a second MEMS mirror (128/136)(fig. 1), and a control circuit (174) disposed between the alignment monitoring photodiode and said first and second MEMS mirrors, said control circuit (174) responding to changes in optical power received by said alignment monitoring photodiode and generating alignment correction signals to said first and second MEMS mirrors to modify the deflection profile of said first and second (128/136) MEMS mirrors and provide optical realignment between the passive optical device and the active light source (see abstract, line 1-8)(col. 8, line 31-65), however the reference of Street is silent regarding an active light source for emitting a beam of light. The use of an active light source for emitting a beam of light is well know as evident by Igasaki et al. (fig. 1)(2003/0010889 A1). Therefore it would have been

obvious to one having ordinary skill in the art at the time of invention to provide an active light or passive light source for emitting a beam of light since this would work equally as well for the purpose of aligning accurately.

Claims 5, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Street et al. (6,760,505 B1) in view of the examiner Official Notice.

As to claim 2, Street discloses everything claimed, as applied to claim 1. The reference of Street discloses of the features of claim 1 comprising an arrangement for controlling (174) the alignment direction of a light beam, a monitoring photodiode/sensor (170/172)(col. 1, line 36-39), the reference of Street suggested a beam splitter (col. 3, line 46-46), however the reference of Street is silent regarding a beam splitter associated with the MEMS mirror. The use of a beam splitter to split beam of light is well known. The examiner wishes to take Official Notice of the fact that the use of a beam splitter to split beam of light would have been well known. It would have been obvious to one having ordinary skill in the art at the time of invention to use a beam splitter that is associated with the MEMS mirror to enable said MEMS mirror to split the beam emitted from said active light source into a first beam and a second beam wherein said first beam is directed toward the passive receiver of light and said second beam is directed toward said monitoring photodiode/sensor for the purpose of detecting and generating electrical signals base on the light signals. Additionally, It would have been obvious to one having ordinary skill in the art at the time of invention to use a beam splitter that is associated with the MEMS mirror to enable said MEMS mirror to split the beam emitted from said active light source into a first beam and a second beam wherein said first beam is directed toward the passive receiver of light and said second beam is directed toward said monitoring photodiode/sensor for the purpose of allowing the detector to detect the position of the incident light and allowing the feedback electronics to use the information to assured that each optical signal being transmitted is centered on the corresponding receiving fiber with accuracy.

As to claims 5, 9 and 11, the reference of Street provided teaches of the features of claims 1, 7 and 10, comprising a plurality of passive light source (116) for emitting a beam of light (fig. 1), however the reference of Street is silent regarding an/plurality of active light source for emitting a beam of light and does not disclose the type of source use as being laser/lasers. The examiner wishes to take Official Notice of the fact that the use of laser/lasers as an active

light source for emitting a beam of light would have been well known. It would have been obvious to one having ordinary skill in the art at the time of invention to use laser/lasers as a light source for the purpose of reflecting/transmitting the beam to a mirror, since these are well known laser/lasers used for their known advantages such as having a brilliant beam of highly monochromatic, coherent radiation is emitted through the mirror and focus onto the passive optical device/detector.

Additional Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references listed in the attached form PTO-892 teach of other prior art alignment devices that may anticipate or obviate the claims of the applicant's invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Official Notice

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re

Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made. See MPEP 2144.03, paragraphs 4 and 6.

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi
May 20, 2006